percent of the pedestrians tested.

8. Three hundred and three tensile pieces of a certain new brittle prime coat material used for experimental stress analysis gave the tensile strengths in the table below at the age of 7 days.

Strength interval (kN/m^2)	200-230	230-260	260-290	290-320	320-350	350-380	380-410	410-440	440-470	470-500
Number of test pieces	7	30	49	76	54	40	36	6	3	2

a) Complete the frequency table.
b) Draw the histogram and frequency polygon.
c) Draw the cumulative frequency diagram.
d) Calculate the mean tensile strength and indicate this on the histogram.
e) Calculate the range and standard deviation.
f) If the permissible tensile strength allowed in design is equal to the mean less 2.33 times the standard deviation, calculate this allowable strength and indicate whether any of the 303 brittle prime coat test pieces fell below this strength.
g) If this criterion for allowable strength is used, show that, when the estimated coefficient of variation of the population is equal to 10%, the maximum allowable design tensile strength is equal to 0.77 times mean strength.

9. To obtain the shrinkage limit of a particular clay, the moisture content in percent of dry weight was determined on 20 specimens with the following results:

15.2	16.7	15.8	14.6	18.1	17.2	18.0	15.9	16.1	16.9
14.8	17.6	18.2	16.9	17.3	16.5	15.6	16.7	15.8	18.2

Calculate the mean and standard deviation of this sample